IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: J. Bednorz et al.

Date: December 18, 1998

Serial No. 08/303,561

Group Art Unit: 1105

Filed: September 9, 1994

Examiner: M. Kopec

For: NEW SUPERCONDUCTIVE COMPOUNDS HAVING HIGH TRANSITION TEMPERATURE, AND METHODS FOR THEIR USE AND PREPARATION

The Commissioner of Patents and Trademarks
Washington, D.C. 20231

AFFIDAVIT UNDER 37 CFR 1.132

Sir:

I, Peter R. Duncombe, being duly sworn, do hereby depose and state:

I received a B.A. degree in Chemistry from the State University of New York at New Paltz, New Paltz, N.Y. and a M.S. degree in Chemical Engineering (1983) from the State University of New York at Buffalo, Buffalo, N.Y.

I have worked as a graduate research assistant in the Chemical Engineering Department of SUNY at Buffalo from 1980-1983. I have worked as a chemical engineer in Ceramics Science at the Thomas J. Watson Research Center of the International Business Machines Corporation in Yorktown Heights, N.Y. from 1984 to the present.

I have worked in the fabrication of and characterization of ceramic materials of various types, including superconductors and related materials from 1984 to the present.

Attached is a resume of my publications (Attachment A).

I have reviewed the above-identified patent application and acknowledge that it represents the work of Bednorz and Mueller, which is generally recognized as the first discovery of superconductivity above 26°K and that subsequent developments in this field have been based on this work.

That all the high temperature superconductors which have been developed based on the work of Bednorz and Mueller behave in a similar manner, conduct current in a similar manner and have similar magnetic properties.

That once a person of skill in the art knows of a specific transition metal oxide composition which is superconducting above 26°K, such a person of skill in the art, using the techniques described in the above-identified patent application, which includes all known principles of ceramic fabrication known at the time the application was filed, can make the transition metal oxide compositions encompassed by the claims in the above-identified application, without undue experimentation or without requiring ingenuity beyond that expected of a person of skill in the art. This is why the

work of Bednorz and Mueller was reproduced so quickly after their discovery and why so much additional work was done in this field within a short period of their discovery.

The general principles of ceramic science referred to by Bednorz and Mueller in their patent application can be found in many books and articles published before their discovery. An exemplary list of books describing the general principles of ceramic fabrication are:

1) Introduction to Ceramics, Kingery et al., Second Edition, John Wiley & Sons, 1976, in particular pages 5-20, 269-319, 381-447 and 448-513, a copy of which is attached herewith.

2) Polar Dielectrics and Their Applications, Burfoot et al., University of California Press, 1979, in particular pages 13-33, a copy of which is attached herewith.

3) Ceramic Processing Before Firing, Onoda et al., John Wiley & Sons, 1978, the entire book, a copy of which is attached herewith.

4) Structure, Properties and Preparation of Perovskite-Type Compounds, F.S. Glasso, Pergamon Press, 1969, in particular pages 159-181, a copy of which is attached herewith.

An exemplary list of articles applying their general principles of ceramic fabrication to the types of materials described in applicants' specification are (these references are cited on applicant's 1449 form submitted August 5, 1987 and in PTO Form 892 in Paper # 20, Examiner's action dated August 8, 1990):

1) Oxygen Defect K_2NiF_4 - Type Oxides: The Compounds $La_{2-x}\,Sr_x\,CuO_{4-x/2+\delta}$, Nguyen et al., Journal of Solid State Chemistry 39, 120-127 (1981).

2) The Oxygen Defect Perovskite $BaLa_4\,Cu_5$-$0_{13.4}$, A Metallic Conductor , C. Michel et al., Mat. Res. Bull., Vol. 20, pp. 667-671, 1985.

3) Oxygen intercalation in mixed valence copper oxides related to the perovskite, C. Michel et al., Revue de Chemie minerale, p. 407, 1984.

4) Thermal Behaviour of Compositions in the Systems x $BaTiO_3$ + (1-x) $Ba(Ln_{0.5} B_{0.5}) O_3$, V.S. Chincholkar et al. Therm. Anal. 6th, Vol. 2., p. 251-6, 1980.

I have recorded research notes relating to superconductor oxide (perovskite) compounds in technical notebook IV with entries from November 12, 1987 to June 14, 1988 and in technical notebook V with entries continuing from June 7, 1988 to May 2, 1989. Complete copies of each of these notebooks are attached - Attachment B - Book IV and Attachment C - Book V. Below is a listing of some of the compounds I prepared and recorded in these notebooks according to the teaching as described in the Bednorz and Mueller patent application using the general principles of ceramic science as described in the books and articles listed above.

In Book IV, $Y_1Ba_2Cu_3O_x$ batch C1 pellet pressing, sintering notes and powder processing specifications start on page 2 and continue intermittently to pg. 40 (pg. 13 has superconductive susceptibility curves for pellet 9). Batch C2 $Y_1Ba_2Cu_3O_3$ detailed from pages 14 to 47.

In Book V green phase (Y_2BaCuO_x) microstructural photomicrographs are logged on pages 15-17 with notes continuing to pg. 19. The perovskite superconductor BiSrCaCu oxide ($Bi_{2.15}Sr_{1.68}Ca_{1.7}Cu_2O_{8+\delta}$) and related perovskites $Ca_{(2-x)}Sr_xCuOx$ and $Bi_2Sr_2CuO_x$ synthesis notations start and continue through pg. 61 with microstructural photomicrographs.

A series of $Y_1Ba_2Cu_3O_x$ stoichiometric perturbations to study compositional effects on 2nd phase or grain boundary phases and their effect on conductivity (resistivity), sintering behavior etc., continue until the end of the book notes on the page dated May 2, 1989 (page not numbered). These are typical perovskite synthetic procedures, microstructural photomicrographs, powder processing methods, characteristic susceptibility curve(s), sintering behavior and the like. Additional notes may be available in later notebooks.

The undersigned affiant swears further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or patent issuing thereon.

By: Peter R. Duncombe
Peter R. Duncombe

Sworn to before me this 18th day of December, 1998.

Sandra M. Emma
Notary Public

SANDRA M. EMMA
Notary Public, State of New York
No. 01PO4935290
Qualified in Westchester County
Commission Expires July 5, 2002

ATTACHMENT A

RESU[redacted] 1998

1. Compensation doping of Ba0.7Sr0.3TiO3 thin films
   Copel, M Baniecki, JD Duncombe, PR Kotecki, D
   Laibowitz, R Neumayer, DA Shaw, TM
   APPLIED PHYSICS LETTERS V73 N13 SEP 28 1998 P1832-1834

2. Method for Forming Noble Metal Oxides and Structures Formed Thereof. June 1998.
   Duncombe, P. R. Hummel, J. P. Laibowitz, R. B.
   Neumayer, D. A. Saenger, K. L. Schrott, A. G.
   RC 98A 41575

3. Growth of Bismuth Titanate Films By Chemical Vapor Deposition and Chemical Solution Deposition. March 1998. RC-21124
   Neumayer, D. A. Duncombe, P. R. Laibowitz, R. B.
   Shaw, T. Purtell, R. Grill, A.

4. Dielectric relaxation of Ba0.7Sr0.3TiO3 thin films from 1 mHz to 20 GHz Baniecki, JD
   Laibowitz, RB Shaw, TM Duncombe, PR
   Neumayer, DA Kotecki, DE Shen, H Ma, QY
   APPLIED PHYSICS LETTERS V72 N4 JAN 26 1998 P498-500

5. Contrasting magnetic and structural properties of two La manganites with the same doping levels
   McGuire, T.R. Duncombe, P.R. Gong, G.Q. Gupta, A. Li, X.W. Pickart, S.J. Crow, M.L.
   J. Appl. Phys. (USA) Vol.83, No.11 1 June 1998 P7076-8

6. Effects of Annealing Conditions on Charge Loss Mechanisms in MOCVD (Ba0.7,Sr0.3)TiO3 Thin Film Capacitors.
   Baniecki, J.D., Laibowitz, RB Shaw, TM Duncombe, PR Saenger, KL Cabral C
   Kotecki, DE , Shen, H , Lian, J., Ma, QY

7. Low Operating Voltage and High Mobility Field Effect Transistors Comproising Pentacene and Relatively High Dielectric Constant Insulators RC21233(94806) 7/17/98
   Dimitrakopoulos, CD Purushothaman S , Kymissis J. Callegari A. , Neumayer DA,
   Duncombe PR, Laibowitz RB, Shaw JM

8. Maximum Magnetorsistance in Granular Manganite/Insulator System close to Percolation Threshold PACS 10/06/98
   DK Petrov, L Krusin-Elbaum, JZ Sun, C Feild, & PR Duncombe

9. Magnetorsistance and Hall Effect of Chromium Dioxide Epitaxial Thin Films
   X.W. Li, A. Gupta, T.R. McGuire, P.R. Duncombe, Gang Xiao

10. Progress Report on High-k dielectric material: amorphous BST from solgel (09/98)
    P. Andry, D. Neumayer, P. Duncombe, C. Dimitrakopoulos, F. Libsch, A. Grill, R. Wisnieff

RC21352(96175)2DEC1998

INCOMPLETE

Personal Inventor History

Name:**Duncombe, P.R.** Serial:**155139** Loc:**RES YORKTOWN**
Patent Pts:**36** TDB Pts:**1** Total Pts:**37** Plateau Lvl:**3**
Plateau Date:**10/24/98** File Update:**11/02/98**
Awards Due:**None**

Title: NOVEL METAL ALKOXYALKOXIDECARBOXYLATES AND USE TO FORM FILMS
06/17/98 Opened as Discl YO8980231 **Status:**Filed
06/22/98 Discl Review **Action:**File
(1) **09/04/98** Filed as Docket YO998254 in US **Rating:** 2 **Pts:**3
Co-inventors: Neumayer, D.A.

Title: SELECTIVE GROWTH OF FERROMAGNETIC FILMS FOR MAGNETIC MEMORY, STORAGE-BASED DEVICES, AND OTHER DEVICES
06/17/98 Opened as Discl YO8980225 **Status:**Filed
06/29/98 Discl Review **Action:**File
(4) **10/15/98** Filed as Docket YO998268 in US **Rating:** 2 **Pts:**3
Co-inventors: Guha, S. Gupta, A. Bojarczuk, N.A. Karasinski, J.M.

Title: BEOL DECOUPLING CAPACITOR MATERIALS
01/28/98 Opened as Discl YO8980024 in US **Status:**Opened
06/24/98 Discl Review **Action:**File
Co-inventors: Rosenberg, R. Ning, T.H. Shaw, T.M. Edelstein, D.C. Neumayer, D.A. Laibowitz, R.B.

(3) "FABRICATION OF Strontium Bismuth Tantalate/Bismuth Titanate Multilayer FERROELECTRIC"
Title: FERROELECTRIC THIN FILM STRUCTURES
10/01/97 Opened as Discl YO8970512 in US **Status:**Opened
09/16/98 Discl Review **Action:**File
Co-inventors: Shaw, T.M. Neumayer, D.A. Laibowitz, R.B.

(2) 10/30/98 SENT TO COUNSEL (L. Schiavo)
Title: CAPACITORS WITH AMORPHOUS DIELECTRICS AND IMPROVED DIELECTRIC PROPERTIES MADE USING SILICON SURFACES AS ELECTRODES
06/06/97 Opened as Discl YO8970261 in US **Status:**Opened
Co-inventors: Shaw, T.M. Neumayer, D.A. Laibowitz, R.B.

Title: FABRICATION OF THIN FILM FIELD EFFECT TRANSISTOR COMPRISING AN ORGANIC SEMICONDUCTOR AND CHEMICAL SOLUTION DEPOSITED METAL OXIDE
03/25/97 Opened as Discl YO8970113 **Status:**Filed
03/25/97 Discl Review **Action:**File
03/25/97 Filed as Docket YO997083 in US **Rating:** 2 **Pts:**3
03/24/98 Filed as Docket YO997083 in JA **Rating:** 2
(6) **03/16/98** Filed as Docket YO997083 in TA **Rating:** 2
03/12/98 Filed as Docket YO997083 in KO **Rating:** 2
04/24/98 Last Office Action
Co-inventors: Purushothaman, S. Dimitrakopoulos, C.D. Furman, B.K. Neumayer, D.A. Laibowitz, R.B.

Title: NOVEL ALKOXYALKOXIDES AND USE TO FORM FILMS
10/30/96 Opened as Discl YO8960411 **Status:**Filed
03/10/97 Discl Review **Action:**File
(5) **01/30/98** Filed as Docket YO997069 in US **Rating:** 2 **Pts:**3
Co-inventors: Neumayer, D.A.

Title: THIN-FILM FIELD-EFFECT TRANSISTOR WITH ORGANIC SEMICONDUCTOR REQUIRING LOW OPERATING VOLTAGES
09/11/96 Opened as Discl YO8960358 **Status:**Filed
03/04/97 Discl Review **Action:**File
(7) **03/25/97** Filed as Docket YO997057 in US **Rating:** 2 **Pts:**3
03/12/98 Filed as Docket YO997057 in KO. **Rating:** 2
04/10/98 Last Office Action
Co-inventors: Purushothaman, S. Dimitrakopoulos, C.D. Furman, B.K. Neumayer, D.A. Laibowitz, R.B.

X **Title:** HIGH DIELECTRIC CONSTANT, BARIUM LANTHANUM TITANATE THIN FILM CAPACITORS FOR RANDOM ACCESS
06/20/96 Opened as Discl YO8960255 in US **Status:**Opened
Co-inventors: Gupta, A. Shaw, T.M. Laibowitz, R.B.

Title: METHOD FOR FORMING NOBLE METAL OXIDES AND STRUCTURES FORMED THEREOF
10/30/95 Opened as Discl YO8950450 **Status:**Filed
11/12/96 Discl Review **Action:**File
11/05/97 Filed as Docket YO996239 in US **Rating:** 2 **Pts:**3
(8) **10/20/98** Filed as Docket YO996239 in JA **Rating:** 2
07/30/98 Filed as Docket YO996239 in TA **Rating:** 2
Co-inventors: Schrott, A.G. Saenger, K.L. Hummel, J.P. Neumayer, D.A. Laibowitz, R.B.

Title: PEROXIDE ETCHANT PROCESS FOR PEROVSKITE-TYPE OXIDES
10/23/95 Opened as Discl YO8950434 **Status:**Filed
08/08/97 Discl Review **Action:**File
(9) **04/08/98** Filed as Docket YO997256 in US **Rating:** 2 **Pts:**3
Co-inventors: Rosenberg, R. Cooper, E.I. Laibowitz, R.B.

Title: RF TRANSPONDER FOR METALLIC SURFACES
08/02/95 Opened as Discl YO8950329 in US **Status:**Opened
Co-inventors: Afzali-ardakani, A. Feild, C.A. Duan, D.W. Brady, M.J. Moskowitz, P.A.

Title: METHOD FOR CLEANING THE SURFACE OF A DIELETRIC
09/06/95 Opened as Discl FI8950292 **Status:**Filed
09/06/95 Sent to Evaluator
02/05/96 Evaluated **Action:**Search
04/19/96 Discl Review **Action:**File
12/06/96 Filed as Docket FI996047 in US **Rating:** 2 **Pts:**3
11/29/97 Filed as Docket FI996047 in KO **Rating:** 2
05/26/97 Filed as Docket FI996047 in TA **Rating:** 2
06/11/98 Last Office Action
Co-inventors: Kotecki, D.E. Wildman, H.S. Yu, C. Natzle, W. Laibowitz, R.B.

Title: NANO PHASE FABRICATION OF COPPER-GLASS CERAMIC COMPOSITE VIAS IN CORDIERITE SUBSTRATES
10/05/92 Opened as Discl YO8920907 in US **Status:**Published
10/08/92 Sent to Evaluator
12/17/92 Discl Review **Action:**Publish
01/06/93 Mailed to Tech Discl Bulletin **09/02/93** Published **Pts:**1
Co-inventors: Kang, S.K. Shaw, T.M. Brady, M.J.

Title: METHOD OF SINTERING ALUMINUM NITRODE
11/06/92 Opened as Discl FI8920668 in US **Status:**Closed
11/06/92 Sent to Evaluator
12/18/92 Closed
Co-inventors: Takamori, T. Shinde, S.L.

Title: METHOD OF SINTERING ALUMINUM NITRIDE

11/06/92 Opened as Discl FI8920667 in US **Status:**Closed
11/06/92 Sent to Evaluator
12/18/92 Closed
Co-inventors: Takamori, T. Shinde, S.L.

Title: ALUMINUM NITRIDE BODY AND METHOD FOR FORMING SAID BODY UTILIZING A VITREOUS SINTERING ADDITIVE
08/13/92 Opened as Discl FI8920525 **Status:**Filed
08/17/92 Sent to Evaluator
09/29/92 Evaluated **Action:**Search
12/23/92 Discl Review **Action:**File
05/10/95 Filed as Docket FI992168B in US **Rating:** 2 **Pts:**3
05/28/96 Issued as Patent 5520878 in US
Co-inventors: Takamori, T. Shinde, S.L.

Title: ALUMINUM NITRIDE BODY AND METHOD FOR FORMING SAID BODY UTILIZING A VITREOUS SINTERING ADDITIVE
08/13/92 Opened as Discl FI8920525 **Status:**Filed
08/17/92 Sent to Evaluator
09/29/92 Evaluated **Action:**Search
12/23/92 Discl Review **Action:**File
12/22/93 Filed as Docket FI992168A in US **Rating:** 2 **Pts:**3
01/09/96 Issued as Patent 5482903 in US
Co-inventors: Takamori, T. Shinde, S.L.

Title: GOLD DOPING OF YBA2CU3O7-8 AS A MEANS OF INCREASING TRANSPORT CRITICAL CURRENT DENSITY
02/12/92 Opened as Discl YO8920161 in US **Status:**Closed
02/14/92 Sent to Evaluator
05/15/92 Closed
Co-inventors: Daeumling, M. Shaw, T.M.

Title: PROCESS FOR PRODUCING CERAMIC CIRCUIT STRUCTURES HAVING CONDUCTIVE VIAS
07/19/89 Opened as Discl YO8890552 **Status:**Filed
07/25/89 Sent to Evaluator
08/10/89 Evaluated **Action:**Search
07/30/90 Discl Review **Action:**File
12/17/92 Filed as Docket YO990091B in US **Rating:** 2 **Pts:**3
08/16/94 Issued as Patent 5337475 in US
Co-inventors: Vallabhaneni, R.V. Giess, E.A. Farooq, S. Cooper, E.I. Kim, Y.H. Vanhise, J.A. Aoude, F.Y. Muller-landau, F. Shaw, R.R. Walker, G.F. Rita, R.A. Neisser, M.O. Park, J.M. Shaw, T.M. Brownlow, J.M. Kim, J. Knickerbocker, S.H.

Title: VIA PASTE COMPOSITIONS AND USE THEREOF TO FORM CONDUCTIVE VIAS IN CIRCUITIZED CERAMIC SUBSTRATES
07/19/89 Opened as Discl YO8890552 **Status:**Filed
07/25/89 Sent to Evaluator
08/10/89 Evaluated **Action:**Search
07/30/90 Discl Review **Action:**File
03/20/91 Filed as Docket YO990091A in US **Rating:** 2 **Pts:**3
02/01/94 Issued as Patent 5283104 in US
Co-inventors: Vallabhaneni, R.V. Giess, E.A. Farooq, S. Cooper, E.I. Kim, Y.H. Vanhise, J.A. Aoude, F.Y. Muller-landau, F. Shaw, R.R. Walker, G.F. Rita, R.A. Neisser, M.O. Park, J.M. Shaw, T.M. Brownlow, J.M. Kim, J. Knickerbocker, S.H.

Call your award coordinator, IPL department, or T/L 826-2680 for help.

SEND MAIN MENU OTHER OPTIONS

- T.R. McGuire, A. Gupta, P.R. Duncombe, M. Rupp, J.Z. Sun, R.B. Laibowitz, W.J. Gallagher & G. Xiao "Magnetoresistance and Magnetic Properies of $(La_{1-x})MnO_{3-\delta}$ Thin Films" 3M Conf. Proc: 4/96
- T.R. McGuire, P.R. Duncombe, G.Q. Gong, A. Gupta, X.W. Li & G. Xaio "Magnetoresistance & Magnetic Properties of $(La_{1-x})MnO_{3-\delta}$ (Vacancy) Bulk Materials" 11/96 3M conf CMR Open Forum entry
- J.Z. Sun, L. Krusin-Elbaum, A. Gupta, G. Xiao, P.R. Duncombe, W.J. Gallagher & S. P. Parkin "Magneto-Transport in Doped Manganate Perovkites" 3M conference 11/12-15/96 Atlanta, Georgia
- P. Lecoeur, A. Gupta, P.R. Duncombe, G. Gong & G. Xiao "Emission Studies of the Gas-Phase Oxidation of Mn during Pulsed Laser Deposition Managanates in O2 & N2O Atmospheres" JAP 80(1), 7/1/96
- J.Z. Sun, L. Krusin-Elbaum, A. Gupta, G. Xiao, P.R. Duncombe, W.J. Gallagher & S.S.P. Parkin "Colossal Magnetoresistance in Doped Manganate Perovskites" IBM J&D to appear 1996/97
- A. Gupta, G.Q. Gong, G. Xiao, P.R. Duncombe, P. Trouilloud, P. Lecoeur, Y.Y. Wang, V.P. Dravid, & J.Z. Sun "Grain Boundary Effects on the Magnetoresistance Properties of Perovskite Manganite Films"
- J.Z. Sun, W.J. Gallagher, P.R. Duncombe, L. Krusin-Elbaum, R.A. Altman, A. Gupta, Y. Lu, G.Q. Gong & G. Xaio "Observation of Large Low-field Magnetoresistance in Tri-layer Perpendicular Transport Devices Made Using Doped Manganate Perovskites" to appear Appl. Phys. Lett.
- J.Z. Sun, L. Krusin-Elbaum, P.R. Duncombe, A. Gupta & R. B. Laibowitz "Spin-Polarized Tunneling in Doped Perovskite Manganate Trilayer Junctions" APL submission 11/96
- T.R. McGuire, P.R. Duncombe, C.Q. Gong, A. Gupta, X.W. Li & G. Xiao "Interlayer Exchange Coupling & Magnetoresistance Of LCMO/LSMO 67/33 Multilayers" APL submission
- R.B. Laibowitz, T.M. Shaw, D.E. Kotecki, S. Tiwari, A. Gupta, A. Grill, & P.R. Duncombe "Properties and Applications of Thin Films of Lead Lanthanum Titanate (PLT) and Barium Strontium Titanate (BST) APS mtg 3/18-22/96
- P.R. Duncombe. S.L. Shinde, & T. Takamori "Aluminum Nitride Body Utilizing A Vitreous Sintering Additive" US05482903 1/9/96 (EF Plaque)
- P.R. Duncombe, S.L. Shinde, & T. Takamori "Aluminum Nitride Body & Method for Forming Said Body Utilizing a Vitreous Sintering Additive" US05520878 issued 5/28/96; I.A. Patent issue Award: 8/96
- Ali Afzali-Ardakani, Mike Brady, Dah-Weih Duan, Peter Duncombe, Chris Feild, and Paul Moskowitz "RF Transponder for Metallic Surfaces" Docket#:YO895-0329 submitted: 8/2/95
- D.E. Kotecki, R.B. Laibowitz, W. Natzle, C. Yu, H. Wildman, P.R. Duncombe "Method for Cleaning the Surface of BST Prior to Electrode Deposition" Application #:FI996047 draft #1 under review
- E.I. Cooper, P.R. Duncombe, R.B. Laibowitz, "Peroxide Etchant Process for Titanate Dielectrics" Docket: YO895-0434 rated file; in prep.
- D.A. Neumayer, P.R. Duncombe, R.B. Laibowitz, & A. Grill "Sol-Gel Processing of BaSrTiO3 Films" submitted to International Symposium on Integrated Ferroelectrics (ISIF: 3/2-5/97) Santa Fe, N.M.
- A. Grill, R. Laibowitz, D. Beach, D. Neumayer & P.R. Duncombe "Effect of Base Electrode on the Crystallization & Electrical Properties of PLT" IBM RC 20402 (90185) 3/5/96
- D.A. Neumayer, P.R. Duncombe, R.B. Laibowitz & A. Grill "Effect of TiOx Nucleation Layer on Crystallization of Sol-Gel Derived Bi4Ti3O12 Films" ISIF submission 3/97
- C.D. Dimitrakopoulos, P.R. Duncombe, B.K. Furman, R.B. Laibowitz, D. Neumayer, S. Purushothaman, J. Shaw "Field Effect Transistor for Low Voltage Operation" Disclosure YO896-0358 rated file: 9/11/96
- R.B. Laibowitz, P.R. Duncombe, D. Neumayer,K.L. Saenger, A.G. Schrott "Noble Metal Surfaces" YO896-04xx rated "file" 10/96
- T. Shaw, R.B. Laibowitz, P.R. Duncombe & A. Gupta "High Dielectric Constant Barium Lanthanum Titanate-Based DRAM Structures" Disclosure #: YO898-0681 rated File 5/96 in preparation
- D. Neumayer, P.R. Duncombe "Fabrication of Barium Strontium Titanate Films" YO896-04xx rated File 10/96 in preparation

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